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EXAMINER
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ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	**Application No.** 09/453,340	**Applicant(s)** CAIN ET AL.
	Examiner Robert W Wilson	**Art Unit** 2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _02 December 1999_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-22_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-22_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _6_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.0 The application of Bradley Cain et al. for a "Priority Forwarding In A Communication System" which was filed on December 2, 1999. The application did not claim foreign priority. The case was examined and Claims 1-22 are pending.

Drawings

2.0 The drawings in this application are objected to by the Draftsperson as informal. Any drawing corrections requested, but not made in the prior application should be repeated in this application if such changes are still desired. If the drawings were changed and approved during the prosecution of the prior application, a petition may be filed under 37 CFR 1.182 requesting the transfer of such drawings, provided the parent application has been abandoned. However, a copy of the drawings as originally filed must be included in the 37 CFR 1.60 application papers to indicate the original content.

Claim Rejections - 35 USC § 112

3.0 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-7, 10-13, and 18-21 are rejected relative to 112 2nd paragraph because the metes and founds of the claim cannot be assessed.

Referring to Claims 3,4,10, 11, and 18, What is meant by "providing"... "access to the priority function"?

Referring to Claims 5,6,7,12,13,19,20, and 21; What is meant by "forwarding the message by the second protocol to the first protocol"?

Claim Rejections - 35 USC § 103

4.0   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-3, 5-10, 12-17, and 19-22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Baruch (U.S. Patent No.: 6,487, 206B1).

Referring to Claim 1, Baruch teaches: A method for forwarding a message between a

first protocol and a second protocol (Forwarding messages between a non-ATM protocol or first

protocol and ATM protocol or second protocol per Abstract) and the method comprising:

Associating with the first protocol a priority function for assigning a priority level to the

message (The non-ATM protocol or first protocol identifier or priority function per Fig 4 is

translated into a ATM priority per 3 line 46-col 5 line 45).

Invoking the priority function by the second protocol in order to determine the priority

level for the message (col 3 line 46-col 5 line 45)

In Addition:

Priority function determines the priority level for the message based upon protocol-

specific elements of the protocol (The ATM switch opens up the payload and looks at the bits in

the non-ATM PDU per Fig 4 or col 3 line 46-col 5 line 45) as claimed in **Claim 2.**

Invoking the priority function by the second protocol comprises: providing the second

protocol with access to the priority function (The meaning of this is unclear. The examiner

interprets this to mean ATM or the second protocol assigns or invokes the CLP bit or has access

to the priority function per col 4 line 54-67) as claimed in **Claim 3**

Forwarding the message by the second protocol to the first protocol (The meaning of this

is unclear. The examiner interprets this to mean that the priority associated with the first

protocol is incorporated as a priority value in the second protocol. This is function is performed

by the reference per col 3 line 46-col 5 line 45) as claimed **in Claim 5.**

Forwarding the message by the second protocol to the first protocol comprises:

forwarding the message along with an indication of the priority level for the message (The

meaning of this is unclear. The examiner interprets this to mean that the priority associated with

the first protocol is incorporated as a priority value in the second protocol. An example is that

the ATM function reviews the bits shown in Fig 4 and assigns the CLP bit per col 4 line 54-67;

consequently, this is function is performed by the reference per col 3 line 46-col 5 line 45) as

claimed **in Claim 6.**

Forwarding the message by the second protocol comprises: maintaining a plurality of

queues, each queue corresponding to one of the plurality of priority levels; and placing the

message on the queue corresponding to the priority level and placing the message on the queue

corresponding to the priority level (The meaning of this is unclear. The examiner interprets this

to mean that the priority associated with the first protocol is incorporated as a priority value in

the second protocol. This is function is performed by the reference per col 3 line 46-col 5 line

45. The queues are shown in Fig 2) as claimed **in Claim 7.**

Baruch does not particularly call for: forwarding a message but teaches forwarding of a

non-ATM PDU per Abstract.

It would be obvious to one of ordinary skill in the art at the time of the invention that forwarding the non-ATM PDU performs the same function as forwarding a message.

Referring to Claim 8, Baruch teaches: A device comprising a priority function for assigning a priority level to a message associated with a first protocol (The device is the ATM-EDGE DEVICE 16 per Fig 1. Forwards messages between a non-ATM protocol or first protocol and ATM protocol or second protocol per Abstract)

A second protocol operably coupled to invoke the priority function in order to determine the priority level for the message (The non-ATM protocol or second protocol has a priority identifier or priority function per Fig 4 which is translated into a ATM priority per 3 line 46-col 5 line 45).

In Addition:

Priority function determines the priority level for the message based upon protocol-specific elements of the protocol of the first protocol (The ATM switch opens up the payload and looks at the bits in the non-ATM PDU per Fig 4. These non-ATM bits shown in Fig 4 are utilized to assign bits ATM priority bits for example the CLP bit per col 3 line 46-col 5 line 45) as claimed in **Claim 9.**

The first protocol is operably coupled to provide the second protocol with access to the priority function (The meaning of this is unclear. The examiner interprets this to mean ATM or the second protocol has accesses or assigns priority to the ATM by reading the bits in non-ATM PDU and for example assigns or invokes the CLP bit per col 4 line 54-67) as claimed in **Claim 10**

The second protcol is operably coupled to forward the message to the first protocol (The meaning of this is unclear. The examiner interprets this to mean that the priority associated with the non-ATM PDU or first protocol is read by ATM or second protocol. The priority of the non-ATM PDU or first protocol is incorporated as a priority value in the ATM cell or second protocol. This is function is performed by the reference per col 3 line 46-col 5 line 45) as claimed **in Claim 12.**

The second protocol is operably coupled to forward the message to the first protocol along with an indication of the priority level for the message (The meaning of this is unclear. The examiner interprets this to mean that the priority associated with the non-ATM PDU or first protocol is read by ATM or second protocol. The priority of the non-ATM PDU or first protocol is incorporated as a priority value in the ATM cell or second protocol. This is function is performed by the reference per col 3 line 46-col 5 line 45) as claimed **in Claim 13.**

a plurality of queues interposed between the first protocol and the second protocol for interfacing the second protocol to the first protocol, wherein each queue corresponds to one of the plurality of priority levels, and wherein the second protocol is operably coupled to place the message on the queue corresponding to the priority level (The meaning of this is unclear. The examiner interprets this to mean that the priority associated with the first protocol is incorporated as a priority value in the second protocol. Queues are shown in Fig 2.This is function is performed by the reference per col 3 line 46-col 5 line 45.) as claimed **in Claim 14.**

Baruch does not particularly call for: first protocol but teaches Non-ATM PDU or a

second protocol but teaches ATM PDU.

It would be obvious to one of ordinary skill in the art at the time of the invention that the

Non-ATM PDU performs the same function as the first protocol and that the ATM PDU

performs the same function as the second protocol.

Referring to Claim 15, Baruch teaches: A program product comprising a computer

readable medium having embodies therein a computer program for providing priority forwarding

of the message (It is within the level of one skilled in the art at the time of the invention to write

a program that utilizes computer readable medium that performs the function of forwarding a

priority), the computer program comprising:

a priority function for assigning a priority level to a message associated with a first

protocol (The device is the ATM-EDGE DEVICE 16 per Fig 1. Forwards messages between a

non-ATM protocol or first protocol and ATM protocol or second protocol per Abstract)

A second protocol operably coupled to invoke the priority function in order to determine

the priority level for the message (The non-ATM protocol or second protocol has a priority

identifier or priority function per Fig 4 which is translated into a ATM priority per 3 line 46-col 5

line 45).

In Addition:

The priority function is programmed to determine the priority level for the message based

upon protocol-specific elements (It is within the level of one skilled in the art at the time of the

invention to write a program that utilizes computer readable medium that performs the function

of determining priority level based upon protocol-specific elements as shown in Fig 4. The

ATM switch opens up the payload and looks at the bits in the non-ATM PDU per Fig 4. These

non-ATM bits shown in Fig 4 are utilized to assign bits ATM priority bits for example the CLP

bit per col 3 line 46-col 5 line 45) as claimed in **Claim 16.**

The first protocol is programmed to provide the second protocol with access to the

priority function (The meaning of this is unclear. The examiner interprets this to mean the non-

ATM PDU or second protocol assigns bits as shown in Fig 4 which are access by ATM or the

per col 4 line 54-67. It is within the level of one skilled in the art at the time of the invention to

write a program that utilizes computer readable medium that performs the function of

determining priority level based upon protocol-specific elements as shown in Fig 4.) as claimed

in **Claim 17**

The second protocol is programmed to forward the message to the first protocol along

with an indication of the priority level for the message. (The meaning of this is unclear. The

examiner interprets this to mean that the priority associated with the non-ATM or first protocol is

incorporated as a priority value in the ATM or second protocol. This is function is performed for

example by setting the CLP bit per col 3 line 46-col 5 line 45. It is within the level of one skilled

in the art at the time of the invention to write a program that utilizes computer readable medium

that performs the function of determining priority level based upon protocol-specific elements

and setting a priority bit.) as claimed **in Claim 19.**

Second protocol is programmed to forward the message to the first protocol along with an

indication of the priority levels for the message (The meaning of this is unclear. The examiner

interprets this to mean that the priority associated with the non-ATM or first protocol is

incorporated as a priority value in the ATM or second protocol. An example is that the ATM

function reviews the bits shown in Fig 4 and assigns the CLP bit per col 4 line 54-67;

consequently, this is function is performed by the reference per col 3 line 46-col 5 line 45. It is

within the level of one skilled in the art at the time of the invention to write a program that

utilizes computer readable medium that performs the function of determining priority level based

upon protocol-specific elements and setting a priority bit.) as claimed **in Claim 20.**

The second protocol is programmed to forward the message to the first protocol by

determining a queue from among a plurality of queues based upon the priority level for the

message and placing the message on the queue corresponding to the priority level (The meaning

of this is unclear. The examiner interprets this to mean that the priority associated with the non-

ATM or first protocol is incorporated as a priority value in the ATM or second protocol. This is

function is performed by the reference per col 3 line 46-col 5 line 45. The queues are shown in

Fig 2. It is within the level of one skilled in the art at the time of the invention to write a

program that utilizes computer readable medium that performs the function of determining

priority level based upon protocol-specific elements and setting a priority bit as well as setting up

queues) as claimed **in Claim 21.**

Baruch does not particularly call for: a program product comprising a computer readable

medium but teaches switches, ATM-non PDUs, and ATM PDU.

It would be obvious to one of ordinary skill in the art at the time of the invention to create

a program that would performs the algorithms defined by Baruch in both software and hardware;

therefore, it would be within the skill in the art to install this program on a computer readable medium.

Referring to Claim 22, Baruch teaches: A method for forwarding a message through a layered protocol stack (It would be obvious to one of ordinary skill in the art that the non-PDU shown in Fig 4 are from layer two in a layered protocol stack) between a first protocol (Non-ATM per col 3 line 46-col 5 line 45) and a second protocol (ATM protocol or second protocol per Abstract) and the method comprising:

Receiving the message by a first protocol of the layered protocol stack (ATM or second protocol receives the non-ATM PDU or second protocol per col 3 line 46-col 5 line 45. It would be obvious to one of skill in the art that both the non-ATM PDU and the ATM PDU have define layers a protocol stack)

Invoking by the first protocol a priority function associated with a second protocol of the layered protocol stack in order to determine a priority level for the message priority function by the second protocol in order to determine the priority level for the message (The non-ATM PDU sets priority in the bits shown in Fig 4 which are read by the ATM or second protocol per col 3 line 46-col 5 line 45. It would be obvious to one of ordinary skill in the art at the time of the invention to model the non-ATM PDU and the ATM cell in a layered protocol stack.)

Forwarding the message by the first protocol to the second protocol according to the priority level for the message (The non-ATM PDU has bits set per Fig 4 that define it priority. ATM reads these bits and sets for example a CLP bit in the ATM structure or forwarding the priority level for the message per col 3 line 46-col 5 line 45).

Baruch does not particularly call for: layered stack but teaches non-ATM PDU and ATM

PDU per Abstract

It would be obvious to one of ordinary skill in the art at the time of the invention that the

non-ATM PDU and ATM PDU relate to each other via a layered stack.

Claim Rejections - 35 USC § 103

4.0   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Baruch (U.S. Patent No.: 6,487,206B1) in view of Wills (U.S. Patent No.: 6,002,692).

Referring to Claim 4, Baruch teaches: the method of claim 3, wherein providing the

second protocol access to the priority function

Baruch does not particularly call for: providing the second protocol with a pointer to the

priority function.

Wills teaches: providing the second protocol with a pointer to the priority function (col 7

lines 1-5)

It would be obvious to add the pointer of Wills to the method and system of Baruch in

order to build an ATM system with queues.

Referring to Claim 11, Baruch teaches: the device of claim 10, wherein the first protocol

is operably coupled to provide the second protocol with access to the priority function

Baruch does not particularly call for: providing the second protocol with a pointer to the

priority function.

Wills teaches: providing the second protocol with a pointer to the priority function (col 7

lines 1-5)

It would be obvious to add the pointer of Wills to the method and system of Baruch in

order to build an ATM system with queues.

Referring to Claim 18, Baruch teaches: the method of claim 17, wherein the first

protocol is programmed to provide the second protocol with access to the priority function

Baruch does not particularly call for: providing the second protocol with a pointer to the priority function.

Wills teaches: providing the second protocol with a pointer to the priority function (col 7 lines 1-5)

It would be obvious to add the pointer of Wills to the method and system of Baruch in order to build an ATM system with queues.

5.0   *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Loa, U.S. Patent No.: 6,314,095 dated November 6, 2001 in which he discloses MPLS. It would be obvious to one of ordinary skill in the art that either priority bits in IPV6 or TOS bits (Priority bits) in IPV4 could be tagged by the MPLs or second protocol; thus, by taking priority message in an IP header a tag is added via MPLS or a second protocol; thus, the packet is switched as well as prioritized based upon the MPLS tag.

Shinohara, U.S. Patent No.: 6,067,298 dated May 23, 2000 in which he defines prioritization of ATM.

Cisco White Paper entitled "Policy-Based Routing" dated 1996. Policy-Based routing utilizes the TOS bits in IPV4 or priority bits. The packets are classified and tagged based upon the priority in the TOS bits. Once tagged the packets are now routed, queued, and prioritized
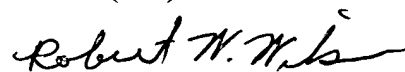
based upon QOS. It would be obvious to one of ordinary skill in the art at the time of the

invention that Policy-Based Routing is a protocol. Policy based routing is a set of rules which

defines how packets are handled. A protocol performs the function of rules on for handling

packets.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner

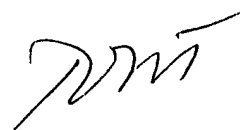can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 872-9314 for regular

communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-4700.

Robert W Wilson
Examiner
Art Unit 2661

RWW
January 18, 2003